



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,916	06/08/2001	Takeshi Okada	392.1717	7079

21171 7590 12/31/2002

STAAS & HALSEY LLP  
700 11TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20001

EXAMINER

HANSEN, COLBY M

ART UNIT	PAPER NUMBER
----------	--------------

3682

DATE MAILED: 12/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/875,916

Applicant(s)  
Okada et al.

Examiner  
Colby Hansen

Art Unit  
3682



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Oct 16, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on Oct 16, 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 3682

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al (US Pat. 4,690,010).

Matsumoto et al ('010) discloses a joint structure of a robot, comprising:

a first member 71 and a second member 73 connected to each other for relative rotation through a speed reducer 70; and

a motor 2 for driving the second member for rotation relative to the first member, wherein the speed reducer 70 includes a first-stage speed reducing mechanism 20 and a second-stage speed reducing mechanism 21,

the first-stage speed reducing mechanism 20 includes an input gear 22 connected directly to the shaft 7 of the motor and a single spur gear 25 in mesh with the input gear,

the second-stage speed reducing mechanism includes a crankshaft 30a connected directly to the spur gear, an external gear 29 which engages the crankshaft to be rocked eccentrically, a casing of the speed reducer, an internal gear 28 which is formed inside the casing and is in mesh

Art Unit: 3682

with the external gear 29, and a rotating member 72 which supports the crankshaft for rotation and can rotate around the central axis of the internal gear with respect to the casing,

the casing (housing of 71 seen in figure 9) of the second-stage speed reducing mechanism is attached to the first member, as broadly recited,

the second member 73 is attached to the rotating member 72 of the second-stage speed reducing mechanism 21, and

the motor 2 is attached to the second member so that the input gear of the motor is in mesh with the spur gear of the first-stage speed reducing mechanism, as broadly recited;

said second member 73 is provided with a mounting portion 4b for mounting the motor in a given position and is attached to the rotating member by a fitting in order to align the axis of the second member with the axis of the output of the speed reducer (fig. 9), and said second member 73 and said rotating member are figured such that the rotational phase of the second member with respect to the rotating member is settled using a positioning pin 46 when attaching the second member 73 to the rotating member 72.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

Art Unit: 3682

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matsumoto et al ('010) in view of Maletti (US Pat. 5,606,235).

Matsumoto et al ('010) discloses the claimed invention except for a hollow portion within the joint to allow piping or wires therethrough or the eccentric positioning of the motor.

Maletti ('235) discloses a robot having a joint structure wherein two members of the robot have a hollow structure inside, and a casing and rotating member are provided with through holes around their common axis so that wiring or piping is secured inside the joint (fig. 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the wire/pipe mounts within the joints of Maletti ('235) within Matsumoto et al ('010) so as to consolidate the space requirements for the pipes/wires as well as to protect said pipes/wires against damage from external elements (e.g. dust, personnel, etc.).

Also it would have been obvious to one having ordinary skill in the art at the time the invention was made to have arranged the motor eccentrically within the housing per the spacial requirements of the housing and also since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Art Unit: 3682

***Response to Arguments***

5. Applicant's arguments filed 10/16/2002 have been fully considered but they are not persuasive.

Applicant argues that the motor is not connected to the rotating member. Now where within the claim is stated that the motor must be mounted on the rotating member rather than "a motor having a shaft, the motor to drive the second member to rotate relative to the first member". As broadly recited, aforementioned limitation is taught by Matsumoto et al (US Pat. 4,690,010).

Applicant argues that the motor shaft is not eccentric. As explained within the above rejection, such a modification would be obvious. In re Japikse 86 USPQ 70.

Applicant argues that Matsumoto et al (US Pat. 4,690,010) discloses the rotating of numerous spur rather than a single spur. Applicant did not limit the motor to rotating multiple gears, rather applicant's limitation states that a single gear is rotated. This is taught by Matsumoto et al (US Pat. 4,690,010), in addition to the actuating of additional gear as well.

***FACSIMILE TRANSMISSION***

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such

Art Unit: 3682

submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MEP.

502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MEP. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_

\_\_\_\_\_

(Signature)

Art Unit: 3682

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MEP. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

### *Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MEP. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



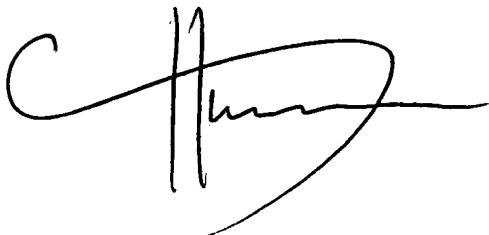
Art Unit: 3682

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colby Hansen whose telephone number is (703) 305-1036. The examiner can normally be reached on Monday through Thursday and every other Friday from 7:30 PM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on (703) 308-3668. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

Colby M. Hansen

Patent Examiner



12/20/02

*William C. Joyce* 12/31/02  
William C. Joyce  
Patent Examiner 3682